

REMARKS

Claims 1-8, 10-18, 20, 21 and 23 are pending in this application, and stand rejected. Claims 9, 19 and 22 have been canceled without prejudice or disclaimer.

The Office Action Summary portion (form PTOL-326) of the Office Action indicates that the Office Action is final. The Applicant respectfully submits that the Office Action was improperly made final. A first Office Action can only be made final in a continuing application if the claims would have been properly finally rejected on the grounds and art of record in the next Office Action if they had been entered in the earlier application. Here, the Examiner has introduced new grounds of rejection, not of record, in the Office Action. Specifically, the Examiner rejects the claims under 35 USC 112, 2nd paragraph. Inasmuch as these grounds are not of record, the Office Action was improperly made final. Withdrawal of the finality of the Office Action is therefore respectfully requested.

The amendment filed on November 26, 2003 was objected to under 35 USC 132 as introducing new matter into the disclosure. The Applicant respectfully disagrees. Support for the amendment may be found throughout the specification, drawings and claims as originally filed. See, e.g, the present specification at page 8, lines 3-4: "Embodiments of the present invention may thereby rearrange an orientation, geometry or ordering of the conduction paths..."; at page 8, lines 19-21: "The numbering of the signals 1-15 helps to better illustrate the rearrangement of the orientation or geometry of the signal lines ...". See also FIGs. 5A and 5B and accompanying discussion at page 11, lines 16-19: "After observing timing characteristics of expected signals on the signal lines 402-430, a designer may determine a reorientation or rearrangement of the signals on the signal lines to minimize or reduce crosstalk or other interference effects. For example, FIG. 5B illustrates another orientation or geometry of signals on the signal lines on the second layer 500." It is further

noted that (to the extent this may be influencing the Examiner's interpretation) claims 1 and 16 recite "effecting," not "affecting" as alleged by the Examiner.

Accordingly, in view of the abundant support for the amendments in the application as filed, withdrawal of the objection is respectfully requested.

Claims 1-7, 16-19, 21, 22 and 23 were rejected under 35 USC 112, second paragraph, as being indefinite. The Examiner refers specifically to the language "... in a first arrangement ..., ... determining a second arrangement ..., ... the second arrangement affecting [sic; effecting] the rearrangement of the first plurality of conductive paths ...". The Examiner states that the noted language is "held vague and indefinite inasmuch as Applicant has failed to disclose that what is intended."

The Applicant respectfully traverses. The MPEP in section 2173.02 sets guidelines for the application of 35 USC 112, second paragraph. Specifically, for example, section 2173.02 says that the Examiner "should allow claims which define the patentable subject matter with a reasonable degree of particularity and distinctness ... Examiners ... should not reject claims or insist on their own preferences if other modes of expression selected by applicants satisfy the statutory requirement." Contrary to the Examiner's assertion, there is no requirement under 35 USC 112, second paragraph that claims "disclose ... what is intended." The Applicant respectfully submits that the present claims are reasonably particular and distinct, and thus fully compliant with 35 USC 112, second paragraph. Withdrawal of the asserted rejection is therefore respectfully requested.

Claims 1-18, 20, 21 and 23 were rejected under 35 USC 103(a) as being unpatentable over JP 07-245575 (hereafter, "'575"). The Applicant respectfully traverses. Independent claims 1, 8 and 16 include limitations clearly not suggested by the cited art. For example, claim 1 recites, among other things, determining a second arrangement for a second plurality of conductive paths based on analyzed characteristics, where the second arrangement effects a

rearrangement of a first plurality of conductive paths. Independent claim 8 recites, among other things, rearranging a pattern of conductive paths based on an analyzed at least one characteristic of a first plurality of relatively parallel conductive paths, such that at least a portion of at least one of a second plurality of relatively parallel conductive paths is laterally offset with respect to a corresponding path of the first plurality of relatively parallel conductive paths. Independent claim 16 recites, among other things, altering a characteristic of a first plurality of conductive paths, where the altering comprises determining a second pattern for a second plurality of conductive paths based on an analyzed characteristic of the first plurality of paths, and where the second pattern effects a rearrangement of the first plurality of conductive paths.

In view of the above, each of the independent claims calls for at least first and second patterns or arrangements, where the second pattern is a rearrangement of the first pattern based on an analysis of characteristics of the first pattern. The '575 reference simply cannot meet such recitations. The '575 reference (at least to the extent that it is intelligible to the Applicant's representative) only shows what appear to be 8 layers of a PCB, each sectioned into 12 "blocks" of length L (see FIG. 1). Each layer apparently extends between two endpoints, "connectors" 1a and 1b. Each endpoint 1a, 1b is assigned one of signals A-H. Each signal apparently changes layers when it reaches a different block. While "wiring patterns" are referred to in the abstract, it is believed that what is meant is "wires," not "wiring patterns." As a basis for the latter, note that the abstract refers to a "wiring pattern shown in broken lines." The only thing meeting this description in '575 are the short, broken-line diagonals in FIG. 1, each of which corresponds to a single signal A, B, C, ... or H. Thus, what '575 calls a "wiring pattern" appears to correspond to a single wire or signal. Accordingly, '575 is clearly silent as to patterns or a rearrangement of a pattern as recited in the independent claims of the present application. It further follows

that '575 is also silent as to a rearrangement of a pattern, based on an analysis thereof, to form a second or different pattern.

Note is taken of the Examiner's statement that the analyzing step recited in the independent claims is "held to be unclear, vague and indefinite and without significance." It is further observed that this "holding" is appended onto a rejection citing 35 USC 103(a), which is a statutory section that concerns obviousness, not lack of clarity or indefiniteness. Nevertheless, the Applicant respectfully submits that the recited "analyzing" language is clear, definite and should be accorded patentable significance. One dictionary definition of "analyzing" is "to weigh or study (various aspects, factors or elements) in order to arrive at an answer, result or solution" (Webster's 3rd New Int'l Dict.), which is entirely consistent with at least one reasonable interpretation of the Applicant's claims. A context for "analyzing" is provided in the present specification at, for example, page 13, lines 6-9: "In block 604, a simulation may be performed on the signal traces based on the anticipated signals that will propagate along the signal traces in actual operation. The results of the simulation (such as push-out and pull-in) may be analyzed in block 606. In block 608, a new geometry or arrangement of signal traces may be determined based on analyzed results of the simulation." It is further observed that the large accumulation of patents to date is replete with claims that recite "analyzing," and thus no less an authority than the Patent Office itself sanctions "analyzing."

The independent claims are therefore allowable over '575. The dependent claims, since they incorporate the limitations of the independent claims, are likewise allowable over '575 for at least the reasons discussed above. In consideration of the foregoing, the Applicant respectfully requests withdrawal of the rejection of claims 1-8, 10-18, 20, 21 and 23 as unpatentable over '575.

Claims 1-18, 20, 21 and 23 were further rejected under 35 USC 103(a) as being unpatentable over Japan Pat. No. 2000-244133 (hereinafter, '133). The Applicant respectfully submits that this document fails to support the asserted

rejection, along lines discussed previously. While '133 shows groups of parallel "wirings" (wires), each group arranged in a given layer at a particular angle with respect to another group in another layer, no relationship between groups is disclosed. By contrast, each of the independent claims of the present application requires at least first and second patterns or arrangements, wherein the first and second patterns have a relationship to each other. That is, the second pattern is a rearrangement of the first pattern based on an analysis of characteristics of the first pattern. The '133 simply discloses no such structure, and it is only by impermissible reference to the Applicant's own disclosure that any suggestion of the claimed structure can be found.

Independent claims 1, 8 and 16 are therefore allowable over '133. The dependent claims, since they incorporate the limitations of the independent claims, are likewise allowable over '133 for at least the reasons discussed above. In consideration of the foregoing, the Applicant respectfully requests withdrawal of the rejection of claims 1-8, 10-18, 20, 21 and 23 as unpatentable over '133.

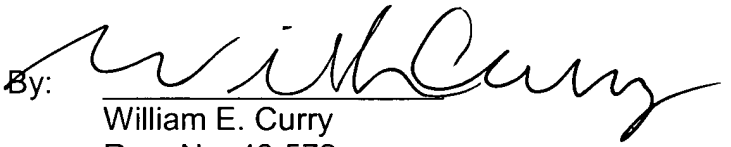
Note is taken of the Examiner's remarks as follows: "Applicant apparently admits that these claims rise or fall upon the patentability of the independent claims on which they depend. That is Applicant waives independent patentability with respect to those dependent claims." To the contrary, the Applicant makes no such admission. The dependent claims are drawn to patentable subject matter neither shown nor suggested by the cited references.

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4323 to discuss any matter concerning this application. The Office is authorized to charge any fees under 37 C.F.R. 1.16 or 1.17 related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: DEC. 30, 2004

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